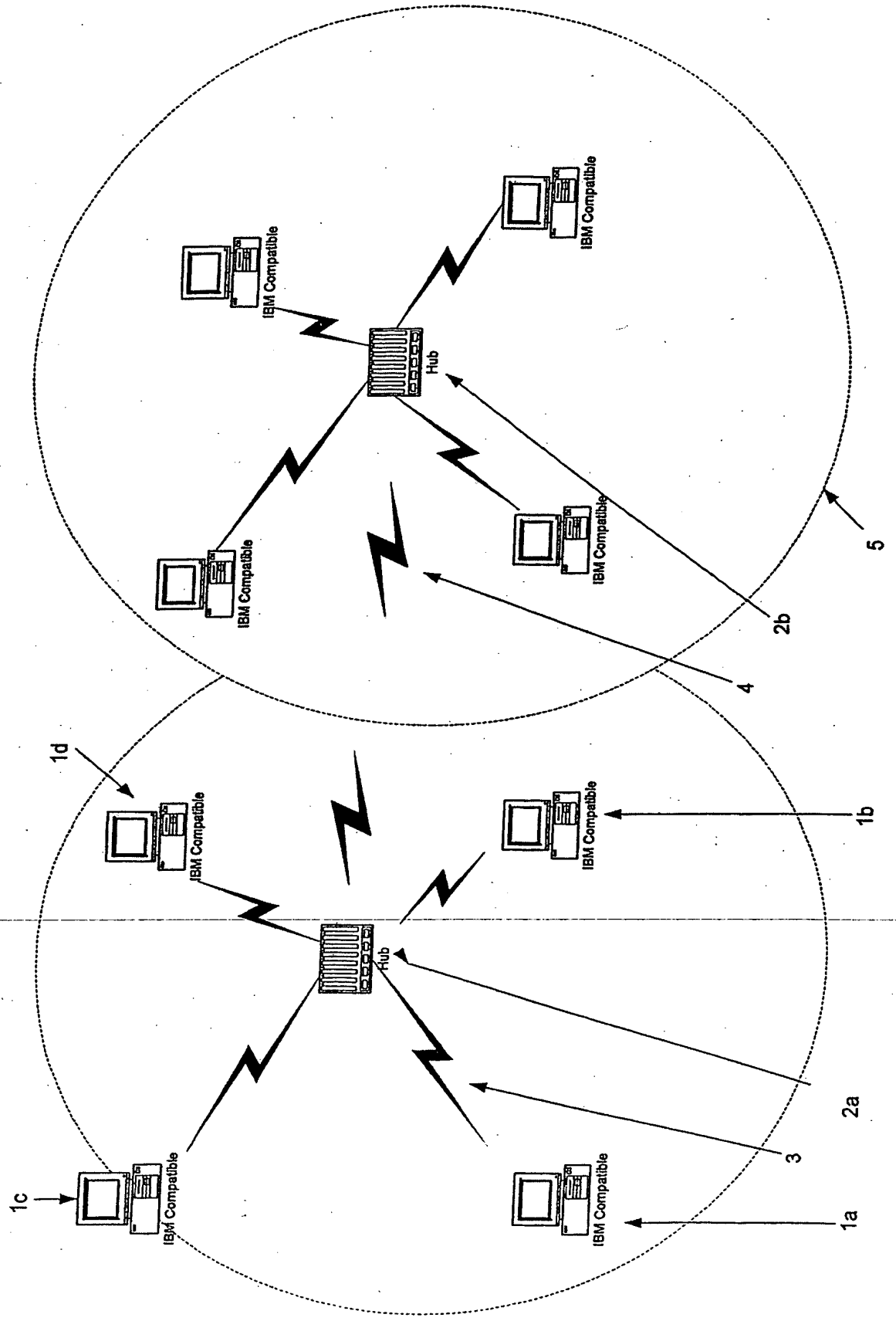
IBM Compatible
IBM Compatible
Hub
IBM Compatible
IBM Compatible
2b
5
4
1d
IBM Compatible
1b
IBM Compatible
Hub
1c
IBM Compatible
IBM Compatible
3
2a
1a

Fig.1

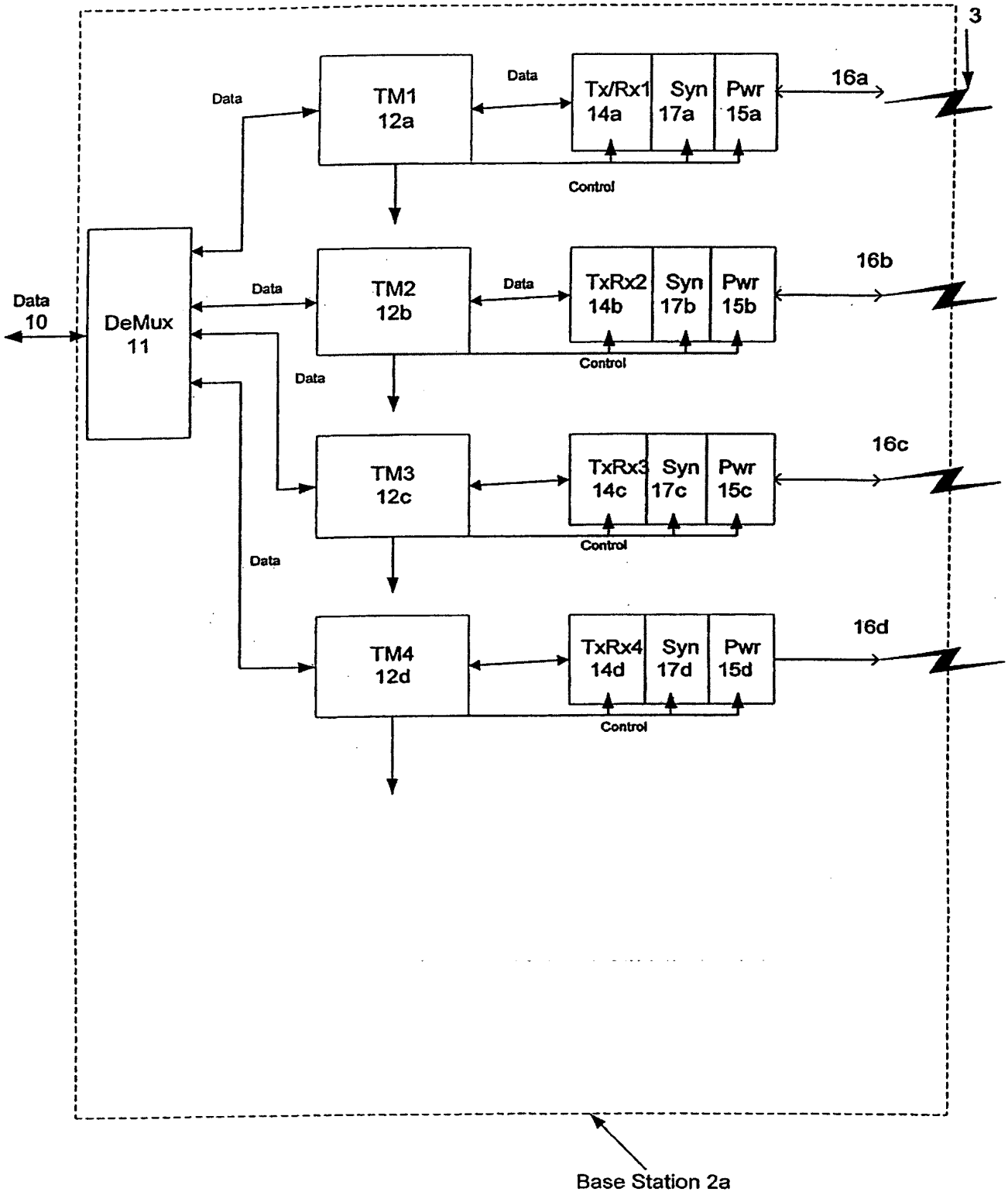
3
Data
10
DeMux
11
Data
TM1
12a
Data
Tx/Rx1
14a
Syn
17a
Pwr
15a
16a
Control
Data
TM2
12b
Data
TxRx2
14b
Syn
17b
Pwr
15b
16b
Control
Data
TM3
12c
TxRx3
14c
Syn
17c
Pwr
15c
16c
Control
Data
TM4
12d
TxRx4
14d
Syn
17d
Pwr
15d
16d
Control
Base Station 2a

Fig.2a

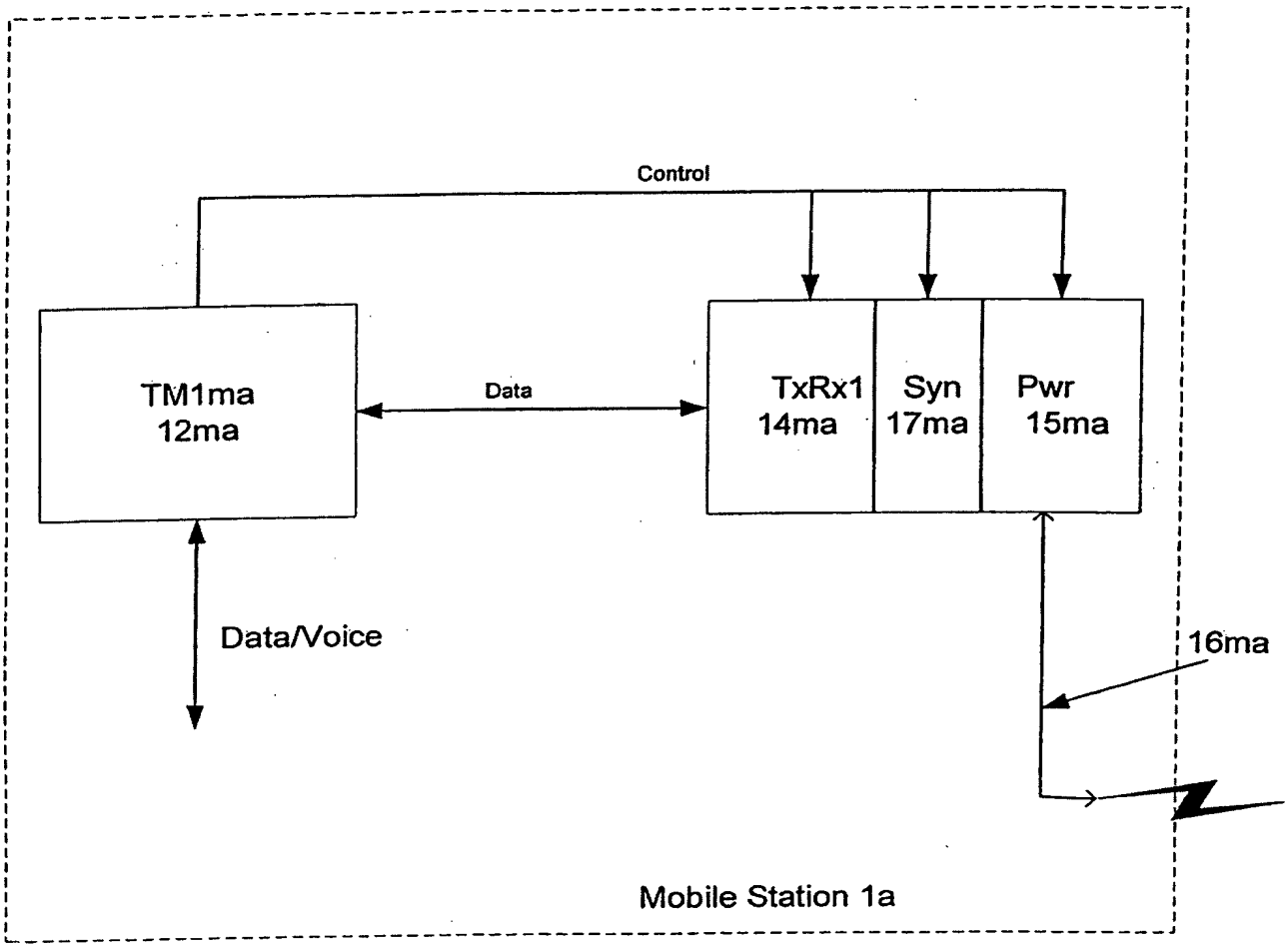
Control
TM1ma
12ma
Data
TxRx1
14ma
Syn
17ma
Pwr
15ma
Data/Voice
16ma
Mobile Station 1a

Fig.2b

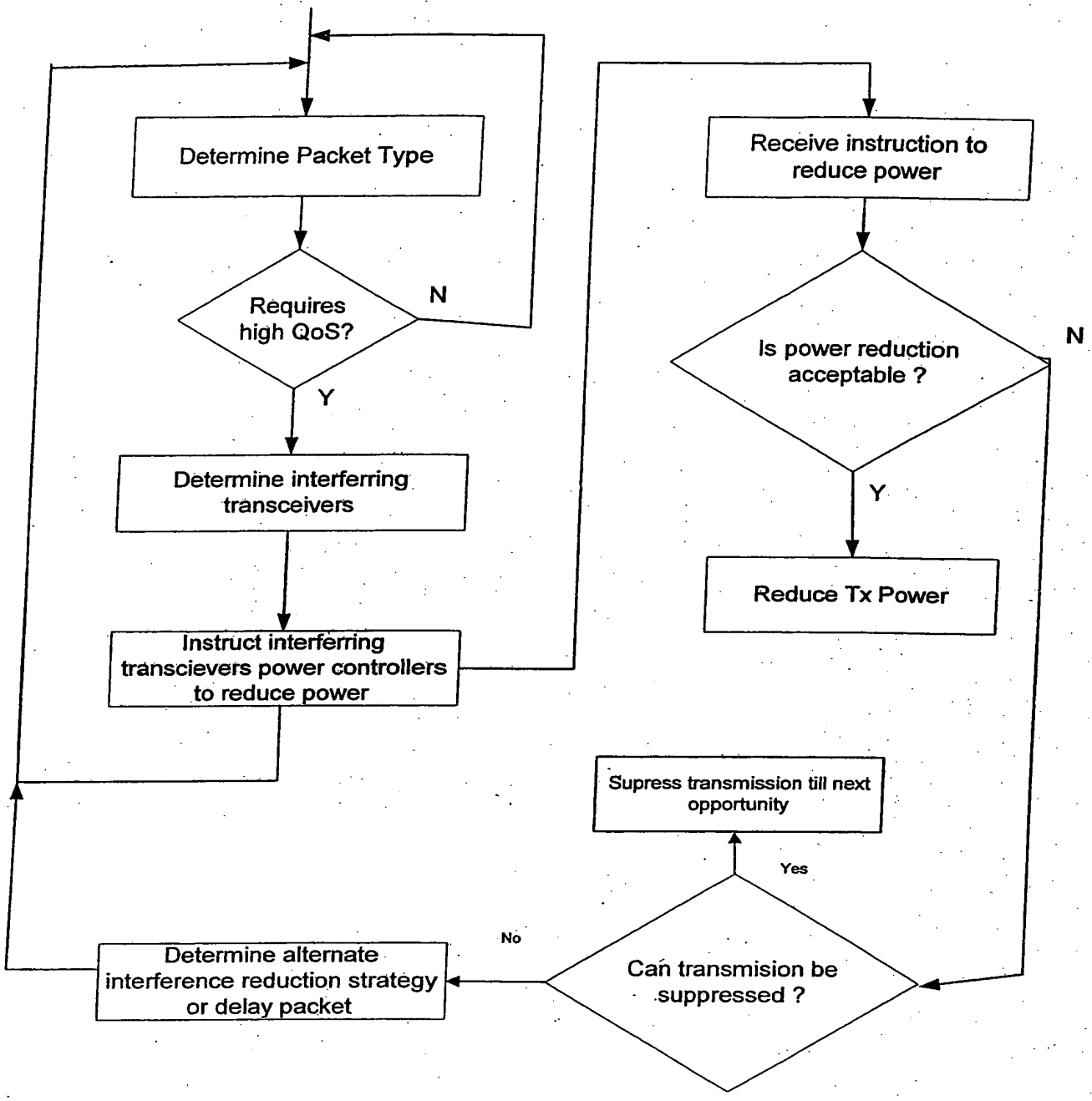
Determine Packet Type
Requires high QoS?
N
Y
Determine interferring transceivers
Instruct interferring transcievers power controllers to reduce power
Receive instruction to reduce power
Is power reduction acceptable ?
N
Y
Reduce Tx Power
Supress transmission till next opportunity
Yes
No
Can transmision be suppressed ?
Determine alternate interference reduction strategy or delay packet

Fig 3

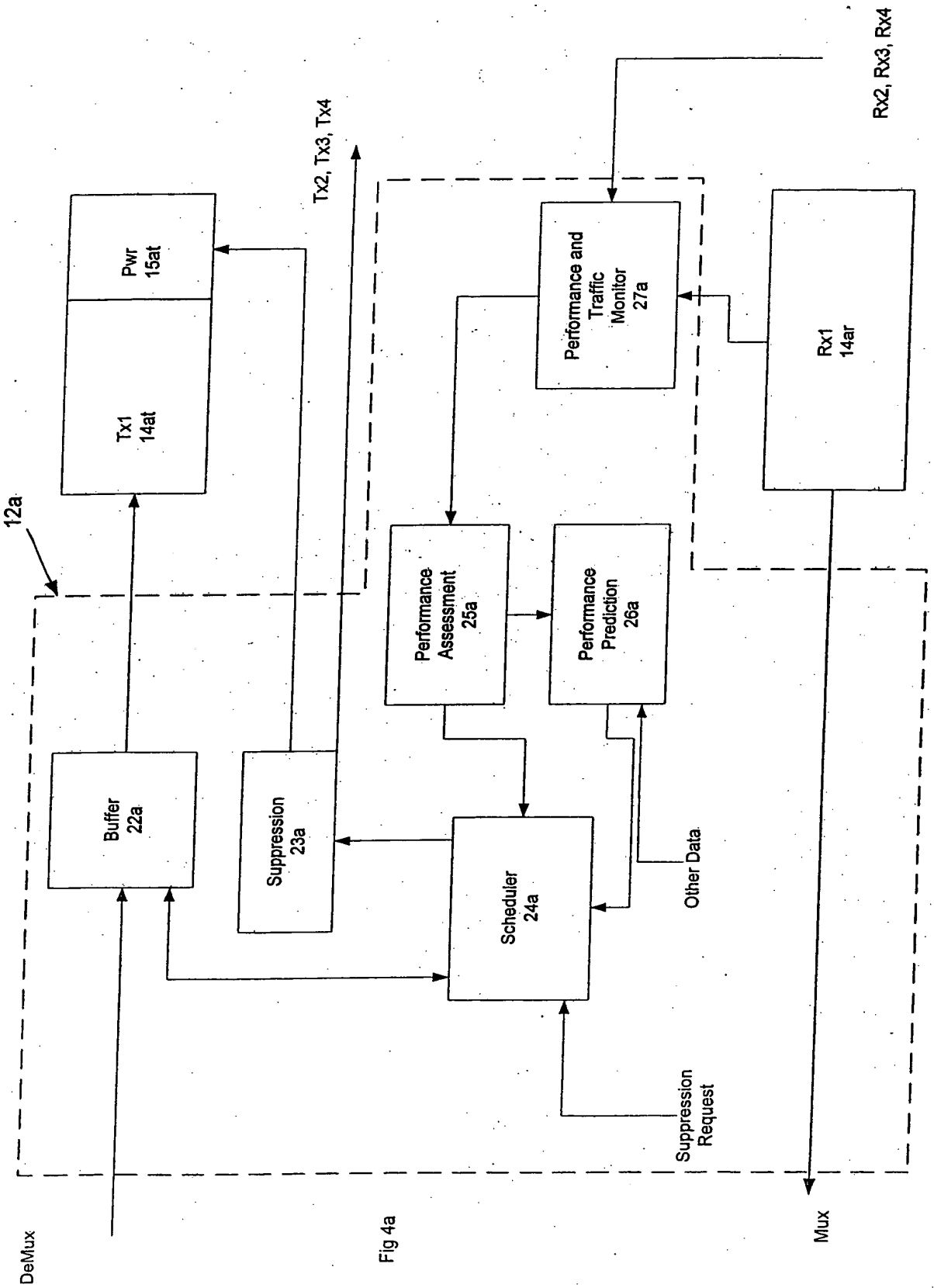
Rx2, Rx3, Rx4
Tx2, Tx3, Tx4
Pwr 15at
Tx1 14at
Performance and Traffic Monitor 27a
Rx1 14ar
12a
Performance Assessment 25a
Performance Prediction 26a
Buffer 22a
Suppression 23a
Scheduler 24a
Other Data
Suppression Request
DeMux
Mux

Fig 4a

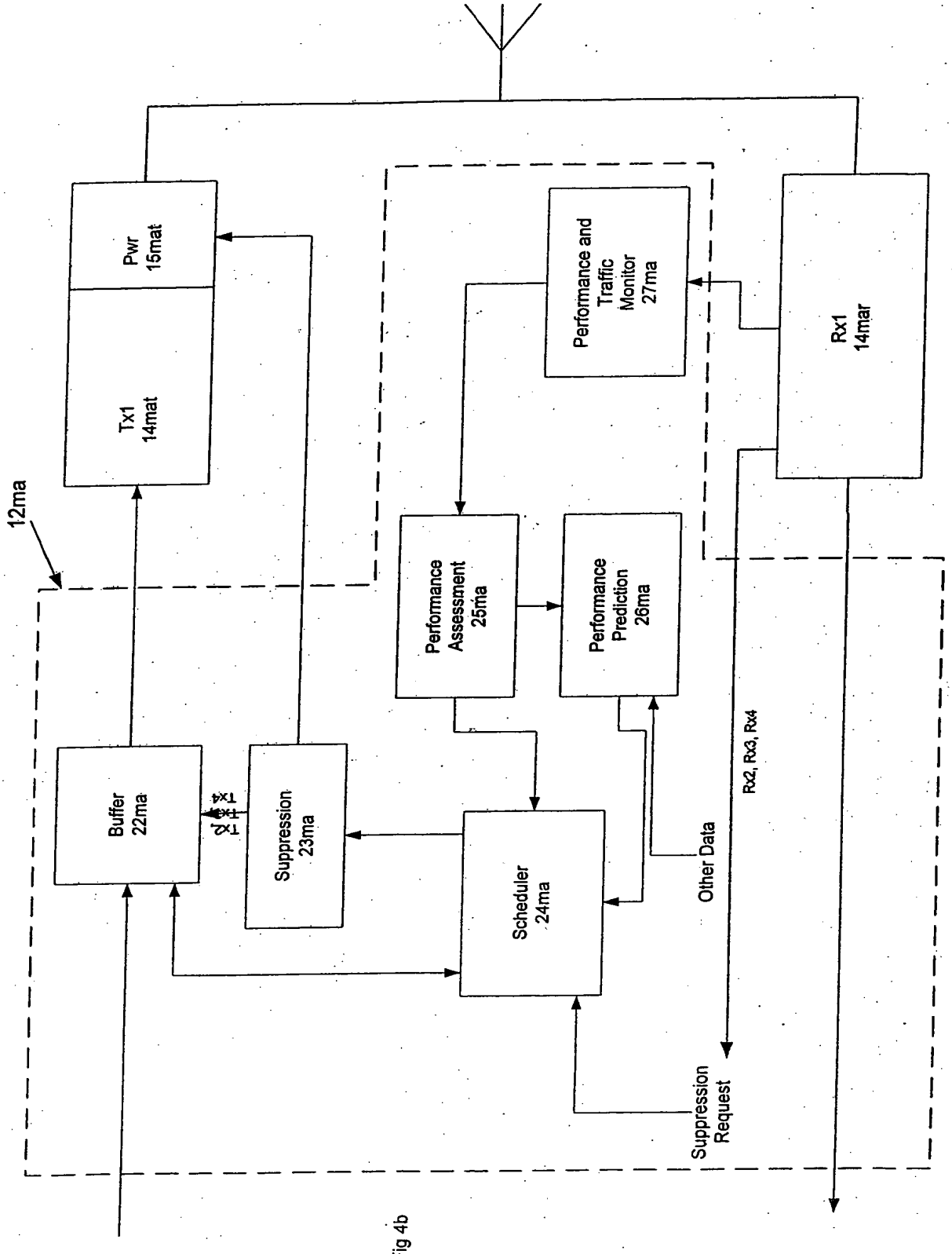
12ma
Pwr
15mat
Tx1
14mat
Performance and
Traffic
Monitor
27ma
Rx1
14mar
Performance
Assessment
25ma
Performance
Prediction
26ma
Buffer
22ma
Tx4
Tx3
Tx2
Suppression
23ma
Scheduler
24ma
Other Data
Rx2, Rx3, Rx4
Suppression
Request

Fig 4b

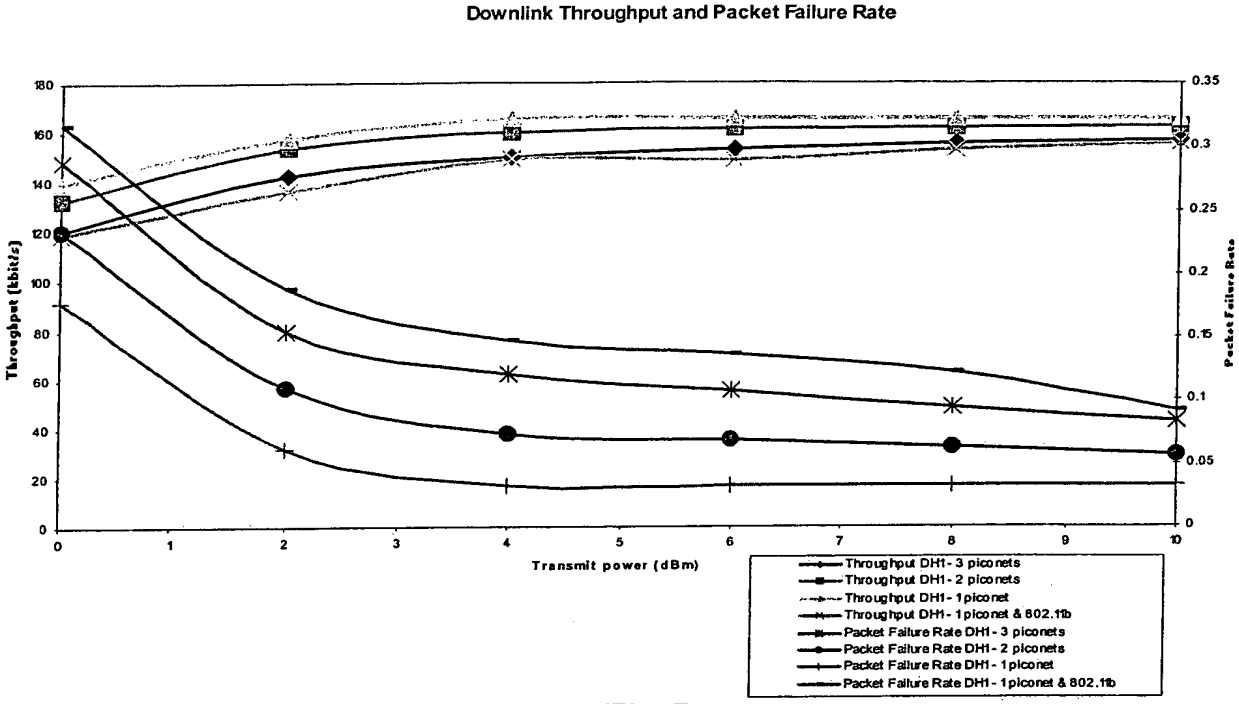
Downlink Throughput and Packet Failure Rate
Throughput (kbit/s)
Packet Failure Rate
Transmit power (dBm)
Throughput DH1 - 3 piconets
Throughput DH1 - 2 piconets
Throughput DH1 - 1 piconet
Throughput DH1 - 1 piconet & 802.11b
Packet Failure Rate DH1 - 3 piconets
Packet Failure Rate DH1 - 2 piconets
Packet Failure Rate DH1 - 1 piconet
Packet Failure Rate DH1 - 1 piconet & 802.11b

Fig 5

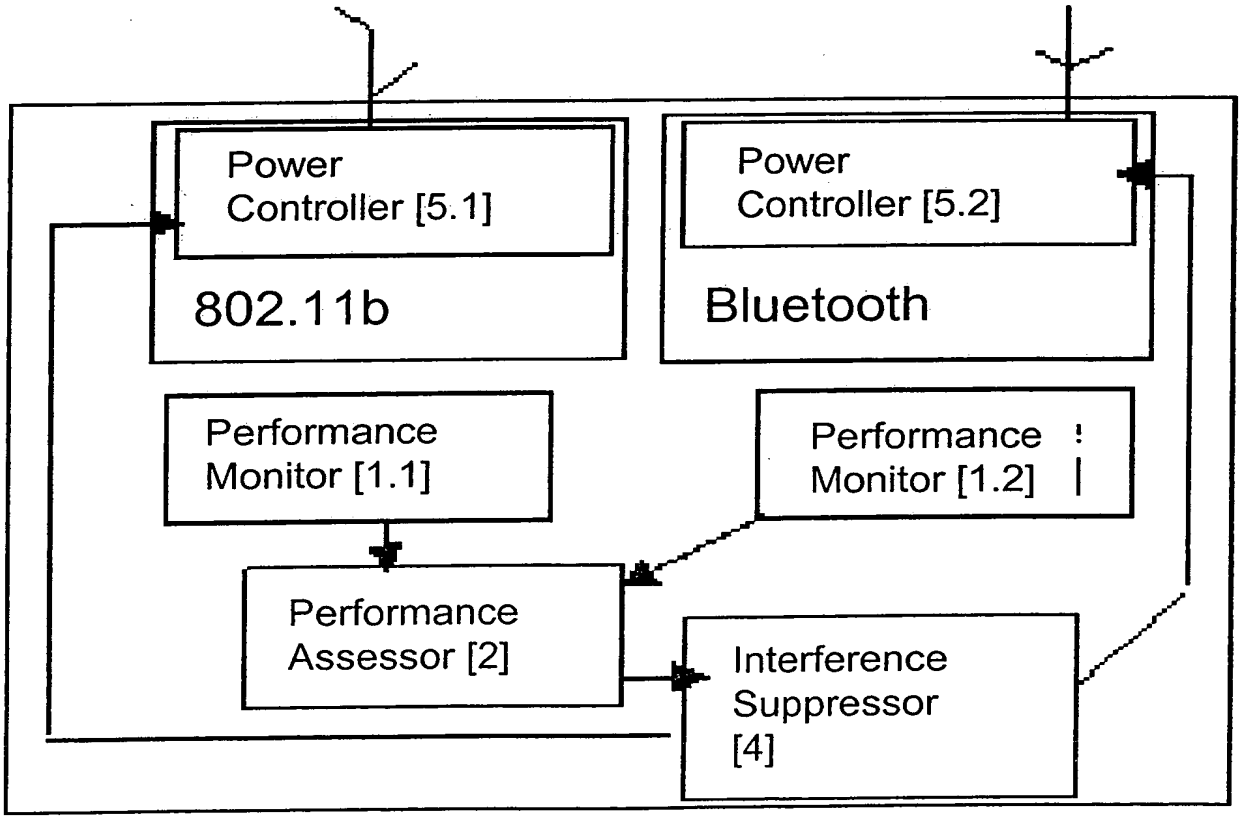
Power Controller [5.1]
802.11b
Power Controller [5.2]
Bluetooth
Performance Monitor [1.1]
Performance Monitor [1.2]
Performance Assessor [2]
Interference Suppressor [4]

Fig 7

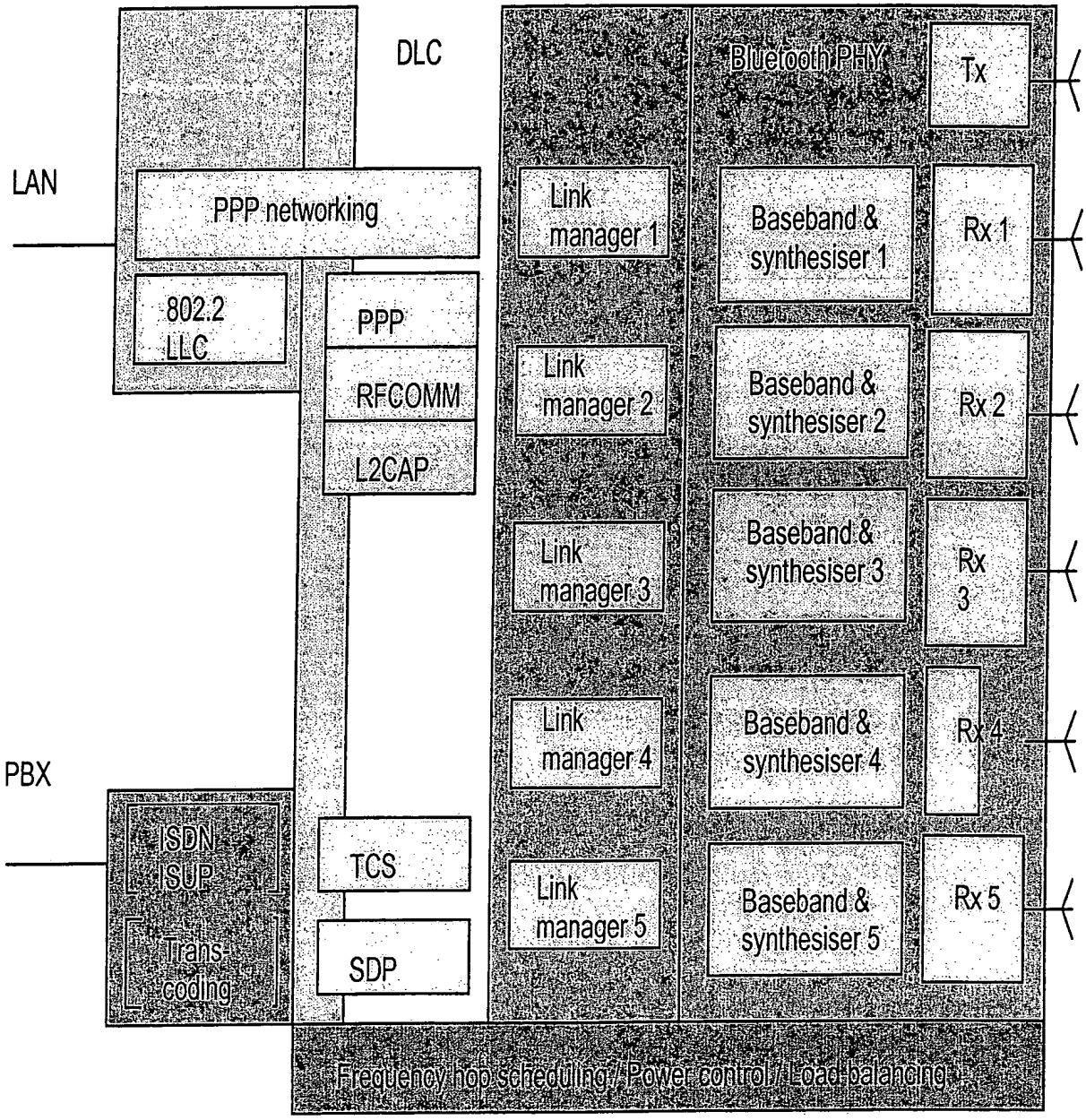

Fig 6

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